AN ECONOMIC MODEL FOR DISTRIBUTING BODY ORGANS

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ABSTRACT

The science of economics is being called upon to offer potential solutions to many of the current problems in our health care delivery system. An area where economic analysis may be very useful is in the shortage of body organs for transplantation. The demand for body organs is far greater than the supply of body organs which results in thousands of individuals dying every year as a result of this market shortage.

The supply of organs comes from living donors and cadavers and has remained in short supply over the years requiring rationing of these vital organs. The shortage of body organs cannot be met by donors alone. According to Feldstein (2007) between 1995 and 2005, 62,367 people waiting for a transplant died during their wait. Since the purchase of organs is illegal the majority of organs are received through the altruism of donors.

This paper will examine the economic value that could be gained by allowing the market forces of supply, demand and price to determine the allocation of resources; in this case much needed body organs. The paper will also be sensitive to the ethical questions that would arise if this type of economic market would ever become a reality.

INTRODUCTION

According to Fuchs, (1998) there are three major problems evident in our health care delivery system in this country. These problems are cost, access and health levels in this country. He goes on to explain that these problems are real symptoms of a number of real economic problems found in the delivery of health services to most Americans. I would like to add a fourth problem to this list that includes the inability of the health care system to supply needed body organs to ill individuals causing thousands of deaths every year. Like Fuchs, I believe this shortage of body organs in America is not the problem but a symptom of the need for the availability of a market for body organs. This is an area where intense economic analysis may be very useful in offering solutions to the shortage of body organs for transplantation.

This type of analysis involves normative economics which includes policy economics. In other words, should there be a policy concerning the availability of body organs through a market mechanism that would involve the price system. These decisions involving medical care are part of the larger field of health economics. Getzen (2007) points out that health economics involves 'value judgments', scarcity issues and trade-offs. They also involve trying to make the health care delivery system become more efficient in the allocation of scarce resources. Rinehart (1988) argues that the price system in a capitalistic system plays a crucial role in keeping supply and demand equal, thus avoiding shortages. These same market forces can solve the shortage of body organs in the United States if they were allowed to work freely and without government regulation.

The science of economics focuses on the price system and the market forces of supply and demand to bring scarce resources to buyers who can afford the price. This system of capitalism has worked very well in making the United States the richest nation in the world today. Economic markets are capable of solving shortages of body organs and seem to be the only solution to helping very ill individuals acquire the body organs that they need to live. According to Greenspan, (2007) the system of capitalism works best under an economic system based on competition. Authoritarian rules, including laws and regulation that prevent competition, make it very difficult to resolve problems created by market imperfections. Therefore, the free capitalistic system works best at avoiding shortages of resources.

The basic economic problem is how to allocate scarce resources in order to satisfy human wants. According to Getzen, (2007) the focus of economic analysis is on the market, that includes buyers and sellers who get together to determine a price for goods and services. This market usually results in a mutual agreement between buyers and sellers that makes each side of the market satisfied with the transaction. Getzen, (2007) also argues that even though economic theory has evolved to examine health issues it is still only one piece of the picture. Therefore, even though economics drives many health decisions there is much more to health care decisions than pure economic theory. Economics can still be a very useful tool in deciding who should receive scarce resources available from our two trillion dollar health care delivery system.

The market is the point at which buyers and sellers exchange dollars for goods and services. The price of the good or service is determined by the equilibrium between demand and supply. The fundamental theorem of exchange demands that both parties must be benefiting if they freely agree to make a trade. Can the system solve the shortage of body organs that can save the lives of thousands of Americans every year?

RATIONING OF ORGANS

The National Organ Transplant Act of 1984 made it illegal to offer or receive payment for organ transplantation. A black market for the purchase of body organs has developed but demand still exceeds supply requiring a rationing system for the available organs. The United Network for Organ Sharing (UNOS) reports a waiting list of candidates for organs is 97,534 individuals and the donors as of January 2007 were only 7,170. It is clear that the market forces for organ donation are not working as evidenced by the critical shortage of organs available for patients in need.

The UNOS under contract with the U.S. Department of Health and Human Services maintains a centralized computer network of available body organs. UNOS links procurement operations and transplant centers together. The individual in need of a transplant is referred by a doctor for evaluation. If the center makes the determination that the patient is a candidate for a transplant, the patient's medical profile is added to the national waiting list for possible organ transplants. When an organ is located, a list of potential recipients is produced by the computer. A number of medical factors are utilized along with location to determine the recipient of the organ. A large number of individuals die while waiting for the phone call.

McLaughlin and McLaughlin, (2008) point out that when transplants were first made available it was obvious that there would be a shortage. Medical committees were established at hospitals doing transplants to ration the available organs. The power of markets to deal with the supply and demand of body organs was totally ignored. This resulted in ethical decision making allowing the shortage of organs to grow and individuals to die waiting for an organ that they would never receive. Price controls and rationing systems have been tried in the past and they have never worked. The market system usually comes to the rescue and the shortages disappear.

Bodenheimer and Grumbach, (2005) consider rationing to include limiting care due to scarce resources and utilizing a fair method to distribute these scarce resources that are currently available. Rationing does not use an economic market and price system to work in the distribution of scarce resources. Not only must the outcome be perceived as fair, but so should the process that produced the outcome. It does not seem that anyone is satisfied with the current rationing system for body organs.

ECONOMIC APPROACH TO THE DISTRIBUTION OF ORGANS

Goodwin, Nelson, Ackerman and Weisskopf, (2005) argue that markets are best because resources will not be left idle and resources will always be put to their most valuable use. The development of a market for body organs free of legal restrictions will increase the incentive for individuals to donate their body organs. McConnell and Brue, (2007) argue that prices that are fixed by law block the operation of the price system causing a distortion in the allocation of resources.

The problem is that the demand for body organs is far greater than the supply of body organs which results in thousands of individuals dying every year as a result of this market shortage. The demand for transplants has increased because of the use of immunosuppressive drugs to reduce the risk of rejection. The supply of organs comes from living donors and cadavers and has remained in short supply over the years requiring rationing of these vital organs.

Feldstein, (2007) argues that the demand for body organs for transplant purposes is outpacing the available supply of these organs. Between 1995 and 2005 the demand for organs increased 121 percent while the supply increased by only 45 percent. This left over

50,000 people waiting for the availability of a body organ required to save their life. Feldstein, (2007) points out that more than 70 percent of these individuals are waiting for a kidney. The laws against selling body organs are simply forcing the rationing of organs and the development of a secondary black market for organ purchase.

Feldstein (2007) also points out that the number of transplants is increasing each year, the gap between those waiting for organ transplants and the supply of organs has been growing rapidly as more patients are being recommended for such transplants. Without any incentives for donors or physicians and hospitals to recruit donors, the shortage of organs will become more severe. Supply and demand factors for body organs have actually been made worse through medical progress. Preventive measures in car safety and design have reduced deaths from automobile accidents while better drugs have made demand increase while the increase in diseases like Hepatitis C and Cirrhosis have increased the demand for some body organs like livers.

For this reason, there is a real need for a market for body organs for transplant purposes. This market will consist of a very large number of potential buyers of body organs and an almost equal number of potentially available body organs every year. The problem will only be solved by allowing the economic market system that distributes other goods and services n our country to work with organ supply.

There are several possible donor compensation models under discussion. These proposals include: compensating families of donors, compensating donors before death and offering incentives to physicians and hospitals to pressure families of dying relatives to consider donation of family member's organs after death of their loved one. These models all involve paying for body organs which would probably allow wealthier individuals to have a greater opportunity to receive the body organs. Many economists argue that the incentives to encourage the requisite number of organs to meet supply are not in place and that is why a severe shortage of desperately needed body organs exists. This shortage will not be solved through medical science or altruism but through economics.

Doctors could help the shortage if they would be more aggressive in discussing the issues with family members of terminally ill patients. Again, monetary incentives come into play in order to motivate physician and hospital to become more aggressive in securing agreement from family members on organ donation of their terminally ill family members. Getzen (2007) discusses the concept of "hassle costs" as they relate to physicians discussing organ donation with family members of dying patients. Emergency room doctors, neurosurgeons and internists present at death who find it burdensome to speak with the families and try to get them to agree to donate their loved ones' organs. Taking time to explain the issues, dealing with the emotional distress, and facing frequent refusals are costs for which they obtain no direct benefit. They are a disincentive that greatly reduces the number of organs made available for transplant.

Cohen, (2005) has suggested that a sum of money be paid to individual's estate or designee upon their death if they donate their organs so that someone else can live. Rinehart, (1988) points out that placing a price on body organs would incentivize supply and increase the number of organs available to those who could afford the market price. Granted, this would eliminate many who could not afford the price from receiving an organ they are already excluded from the market because they cannot afford the medical costs associated with the transplantation process. No capitalistic market is ever perfect but at least the market mechanism eliminates shortages.

Other possible methods could include allowing individuals to sell the rights to their organs in return for a reduction in their health or auto insurance premiums. The most controversial approach for increasing the supply of body organs is to pay living donors a sufficiently high price for them to part with one of their kidneys.

David Meltzer, Assistant Professor of Medicine with the Harris Graduate School of Public Policy argues that another way to increase the supply of body organs would be getting family involvement in the donation of body organ from a loved one who has died. Hansmann, (1989) argues for the development of a futures market for body organs. This would require that the rights to body organs would be purchased from an individual while he or she is still alive.

EXTERNALITIES OF THE ECONOMIC APPROACH

There are those who argue that a market for body organs will not work. Since markets work quite well in 95 percent of our capitalistic economy. I question that conclusion since we have never attempted to alleviate the organ shortage through market forces and the price system.

Williams and Torrens, (2008) points out that rationing organ transplants is a matter of significant ethical concern because fewer organs are available for transplant than needed for the 85,000 people on waiting lists for organs. Zutlevics, (2001) argues that support for the development of a market mechanism for the supply of and demand for body organs is growing.

Oswald, (2001) points out that the organ shortage is a very serious problem that must be addressed with new ideas. These new ideas need to come from economics and not medicine or philosophy. Voluntary donations are not working because most people do not want to think about their future death. In fact, they do not even want to consider their possible need for long-term care through a nursing home. Body organs are currently given away by individuals who receive only the satisfaction of knowing that they may have saved someone's life. Making matters worse the precious organs are then rationed to those who have a demand for the organs. An externality to the questionable system of rationing is the development of a black market where only the wealthy or politically connected can acquire the life saving organ.

There is no question that ethical issues are involved in the development of an economic model to increase the supply of available body organs. The ethical principles of distributive justice are designed to guide the allocation of the benefits and burdens of economic activity. This would include strict egalitarianism, which advocates the allocation of equal material goods to all members of society.

There are market failures found in our health care delivery system. One of these failures that occur because of an imperfectly competitive market is externalities or spillover effects because of economic activity. Morris, Devlin and Parkin, (2007) argue that externalities may be good or bad and are the result of costs and benefits of the production of goods and services in a market that are not absorbed by the demanders and supplies in a market.

This market cannot be used to exploit the poor. Therefore, if an organ market is to develop, information needs to be readily available to all about the pluses and minuses of such a market.

There also needs to be more information made available for prospective donors to make decisions about donating organs and the transplantation process. Truog, (2005) argues that there needs to be a standardized process for evaluating potential donors and the availability of information to help donors make an informed choice.

These external costs occur when some members of society are affected adversely by market transactions. These spillover costs are quite capable of appearing in a market for body organs that is controlled by the price system. There are several potential negative economic effects in the use of an economic market to secure body organs. They include: the fact that all Americans would not be able to afford the equilibrium price required to secure a needed body organ. The market may destroy altruism ending the practice of voluntary donation of body organs. Hansmann, (1989) argues that the market could actually create a surplus of body organs.

DISCUSSION

There are those who believe that the purpose of the development of the science of economics was to save lives. Health care economists are asked to assess economic efficiency, in other words, how well the health care system has used the resources available to achieve its stated goals

Thousands of Americans die every year waiting for a body organ that does not arrive in time to save their life. It is very clear that the current policy regulating supply of body organs and then rationing them to fortunate individuals is not working. The market system must be allowed to work by unleashing the forces of supply and demand through the operation of the price system. There is a need for new ideas to make organs available for transplantation purposes in order to save lives. There are enough natural deaths every year to meet the demand for body organs by sick people.

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Koenig, (2003) argues that the moral status of the transplantation enterprise needs to be debated before society allows body organs to be bought and sold in a market. This debate needs to be held and externalities of such a market must be revealed. Once the debate ends, maybe we can get on with a rational solution for the shortage of body organs resulting in so many needlessness deaths every year. It is time to end the debate and allow the market to eliminate the shortage.

To make it illegal to buy or sell a body organ because it may make some people uncomfortable is just not an acceptable reason for rationing the gift of life. Morris et al., (2007) argue that if having a market for body organs is wrong is it not equally wrong to allow premature death because of a shortage of organs that could have been averted by market forces.

The debate concerning the allowing a market for body organs to develop pits economic incentives against ethics. The question becomes "can fair and equitable market develop that would increase the supply of body organs available for desperately ill individuals?"

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